REMARKS

Claims 1-4, 6-10 are pending in the application. Claims 1 and 8 are independent claims; claim 5 was previously canceled; and new claims 9 and 10 have been added by way of the present amendment. Reconsideration is respectfully requested.

In the outstanding Office, claims 1-4 and 6-8 were rejected under 35 U.S.C. Section 112, 1st paragraph; the amendment of the claims of November 26, 2007, was objected to under 35 U.S.C. Section 132(a); claims 1-4, 6 and 8 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over U.S. Patent No. 6,459,218 (Boys) in view of U.S. Patent No. 6,095,661 (Lebens et al.); and claim 7 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Boys in view of Lebens et al. and further in view of U.S. Patent No. 6,690,121 (Weindorf).

35 USC § 112 Rejections

Claims 1-4 and 6-8 were rejected under 35 U.S.C. Section 112, 1st paragraph. Applicant respectfully traverses the rejection.

In particular, the outstanding Office Action states that claims 1-4 and 6-8 are rejected as failing to comply with the written description since the limitation "battery having a voltage less than said predefined minimum forward voltage," as recited in claims 1 and 8 does not appear in the specification.

Applicant asserts that such an embodiment is described in the specification, based on the paragraphs discussed below. In particular, Paragraph **[0002]** of the published application (US 2006/0234779), states: "the invention advantageously applies to any voltage-supplied equipment and especially to battery-supplied equipment." In addition, paragraph **[0016]** states: "Current batteries do not provide a voltage that is high enough for white LEDs." Further, as shown in **FIG. 1** below and as paragraph **[0017]** states: "**FIG. 1** is an example of a device according to the invention for *lighting white LEDs that need to be supplied with a certain predefined reference minimum forward voltage*" (emphasis added). Further, paragraph **[0018]** and **[0019]** disclose:

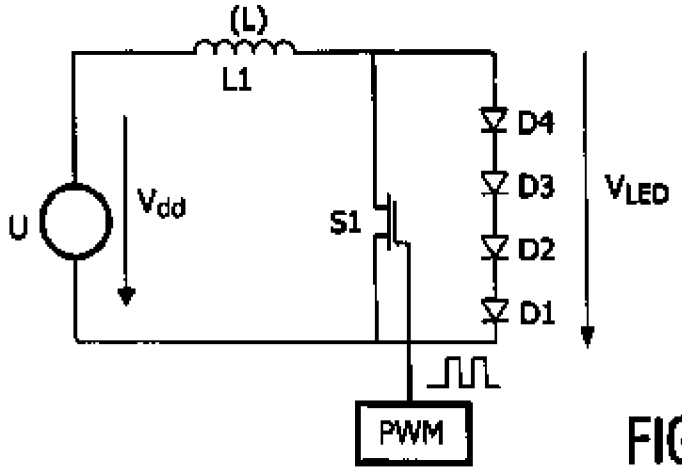

FIG.1

"the LEDs **D1** to **D4**" and voltage supply means **U** for supplying voltage to the LEDs," respectively. Furthermore, paragraph **[0022]** states: "an inductive device or coil **L1** having *an inductance **L** for increasing the forward voltage over the LEDs* when the switch is turned off, so that *the forward voltage gets higher than the minimum forward voltage*" (emphasis added).

Since, as discussed in the above disclosures from the specification:

(1) "voltage supply means" **U** includes the recited: "battery";

(2) lighting white LEDs that need to be supplied with a certain predefined reference minimum forward voltage; and as can be seen in **FIG. 1**,

(3) the "inductance L" is: (a) connected between the "battery" and the LEDs; and (b) "for increasing the forward voltage over the LEDs."

That is, since the inductance L increases the forward voltage; and the inductance L is connected between the battery and the LEDs that need to be supplied with a certain predefined reference minimum forward voltage, it would be clear to one of normal skill in the art and inherent in the disclosure that the voltage of the battery is less that the above-discussed predefined reference minimum forward voltage.

Thus, it is respectfully submitted that the combined disclosures and **FIG. 1** provide support for the limitation of a: "battery having a voltage less than said predefined minimum forward voltage," as recited in claims 1 and 8. Therefore, it is respectfully requested that the

outstanding rejection be withdrawn.

35 USC § 132(a) Rejections

The amendment of the claims of November 26, 2007, was objected to under 35 U.S.C. Section 132(a). Applicant respectfully traverses the rejection.

In paragraph 3, the outstanding Office Action states that the amendment filed on 26 November 2007 is objected to under 35 U.S.C. §132(a) because it introduces new matter into the disclosure. As explained in the section above the use of a battery having a voltage less than said predefined minimum forward voltage is indeed supported by the specification and does not constitute new matter. Therefore, it is respectfully requested that the outstanding rejection be withdrawn.

35 USC § 103(a) Rejections

Claims 1-4, 6 and 8 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Boys in view of Lebens et al. Reconsideration is respectfully requested.

In paragraph 5 the Examiner states that claims 1-4 and 6-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Boys (US patent 6,459,218) in view of Lebens et al. (US patent 6,095,661).

Boys discloses an inductively powered lamp unit.[1] In particular, **FIG. 6** below and specification disclose a resonant circuit **402**; a bridge rectifier **403** made up of four diodes, the output of which is passed through an inductor **501** and through a steering diode **502** to charge a capacitor **505**; a power FET transistor **503** used as a shorting switch to short out the resonant circuit **402** from time to time, each time lasting for a number of cycles; a clock generator **602** producing a pulse; and an output, passed to an AND gate **606** shared by the comparator, and supplying the gate of the power FET transistor **503**; and the output is passed to a circuit **604**

[1] Boys at column 1; and lines 27-31.

which comprises a tone detector.[2]

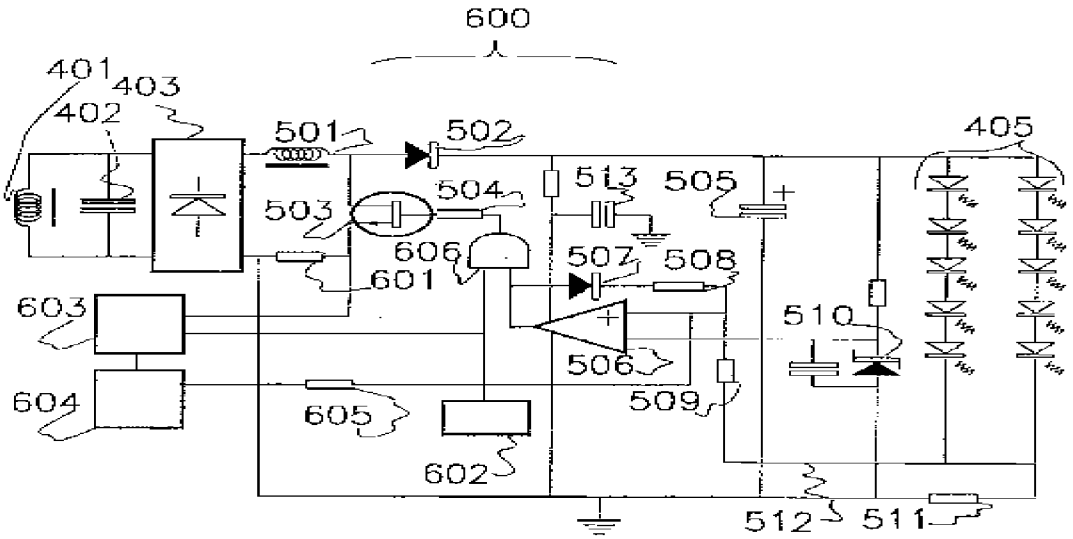

Fig 6

However, Boys nowhere discloses, as independent claim 1 recites:

> *a battery having a voltage less than said predefined minimum forward voltage for supplying voltage to the light emitting diode*,
>
> a pulse generator for generating a cyclic pulse signal having predefined on-times and off-times,
>
> a switch controlled by the pulse generator to be turned on during said on-times to short-circuit the light emitting diode and turned off during said off-times,
>
> *an inductive device for being charged when the switch is turned on and for increasing the forward voltage over the light emitting diode when the switch is turned off,*
>
> *wherein the pulse generator is a pulse width modulation generator* (emphasis added).

Independent claim 8 similarly recites: "supplying a forward voltage to the light emitting diode," and "a battery having a voltage less than said predefined minimum forward voltage." That is, as indicated in the outstanding Office Action, Boys nowhere discloses: "a battery having a voltage

[2] *Id.* at column 6,line 53 to column 7, line 52.

less than said predefined minimum forward voltage for supplying voltage to the light emitting diode" and "wherein the pulse generator is a pulse width modulation generator."

In addition, it is respectfully submitted that Boys nowhere discloses that inductor **501** is: "an inductive device for being charged when the switch is turned on *and for increasing the forward voltage* over the light emitting diode when the switch is turned off," as explicitly recited in the claims.

Furthermore, Boys discloses examples where a fixed source of light is advantageously driven by an inductively powered source, rather than by simple direct connections using conductive materials." Moreover, Boys provides examples of situations "where electrical isolation is necessary."[3] In particular, Boys by providing the lamp and circuit separately and providing power by induction, the lamp and circuit can be isolated better without external inputs or being opened periodically to replace the power source.

Moreover, as stated above and in the outstanding Office Action, Boys does *not* disclose a battery, since a battery would render Boys useless for the intended purpose. That is, Boys actually teaches away from the use of a battery, as recited in the claimed invention. Thus, it is respectfully submitted that Boys does not disclose claims 1 and 8, and claims dependent thereon.

In an attempt to overcome the above-discussed deficiencies, the outstanding Office Action attempts to combine Boys with Lebens et al. However, Lebens et al. cannot overcome all of the deficiencies of Boys, as discussed below.

Lebens et al. discloses an improved method and apparatus for hand-held portable flashlight, wherein the flashlight includes a housing, a plurality of LEDs, and an electrical circuit that selectively applies power from a DC voltage source to the LED units.[4] However, Lebens et al. nowhere discloses, as independent claim 1 recites:

> *a battery having a voltage less than said predefined minimum forward voltage for supplying voltage to the light emitting diode*,
>
> a pulse generator for generating a cyclic pulse signal having predefined on-times and off-times,
>
> a switch controlled by the pulse generator to be turned on during said on-times to short-circuit the light emitting diode and turned off during said off-times,

[3] *Id.* at col. 1; lines 40-53 and col. 12; lines 50-61.
[4] Lebens at ABSTRACT.

> *an inductive device for being charged when the switch is turned on and for increasing the forward voltage over the light emitting diode when the switch is turned off,*
>
> *wherein the pulse generator is a pulse width modulation generator* (emphasis added).

Independent claim 8 similarly recites: "supplying a forward voltage to the light emitting diode," and "a battery having a voltage less than said predefined minimum forward voltage."

As discussed above, Boys does *not* disclose a battery, since a battery would render Boys useless for the intended purpose. That is, Boys actually teaches away from the use of a battery, as recited in the claimed invention. Thus, it is respectfully submitted that Lebens et al. would not be combined with Boys to teach a battery since there is no motivation to add a battery in Boys as required by **MPEP 2143.01**. In addition, there is no reasonable expectation of success as required for showing a *prima facie* case of obviousness by combining a reference according to **MPEP 2143.02**. Thus, for all of the reasons discussed above, Lebens et al. cannot overcome all of the deficiencies of Boys and there is no motivation to combine the references. Therefore, it is respectfully submitted that neither Boys nor Lebens et al., whether taken alone or in combination, discloses, suggests or makes obvious the claimed invention, and that independent claims 1 and 8, and claims dependent thereon, patentably distinguish thereover.

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Boys in view of Lebens et al. and further in view of Weindorf. Reconsideration is respectfully requested.

Claim 7 is ultimately dependent upon claim 1. As discussed above, neither Boys or Lebens et al. disclose all of the limitations of claim 1. Thus, at least for the reasons discussed above, neither Boys or Lebens et al. disclose all of the limitations of claim 7.

In an attempt to overcome the above-discussed deficiencies, the outstanding Office Action attempts to combine Boys and Lebens et al. with Weinsdorf. However, Weinsdorf cannot overcome all of the deficiencies of Boys and Lebens et al. as discussed below.

Weinsdorf discloses a lamp brightness control for a lamp provides backlight illumination for a display.[5] However, Weinsdorf nowhere discloses, as independent claim 1 recites:

> *a battery having a voltage less than said predefined minimum forward voltage for supplying voltage to the light*

[5] Lebens at ABSTRACT.

emitting diode,

a pulse generator for generating a cyclic pulse signal having predefined on-times and off-times,

a switch controlled by the pulse generator to be turned on during said on-times to short-circuit the light emitting diode and turned off during said off-times,

an inductive device for being charged when the switch is turned on and for increasing the forward voltage over the light emitting diode when the switch is turned off,

wherein the pulse generator is a pulse width modulation generator (emphasis added).

Independent claim 8 similarly recites: "supplying a forward voltage to the light emitting diode," and "a battery having a voltage less than said predefined minimum forward voltage."

Moreover, as discussed above, Boys does *not* disclose a battery, since a battery would render Boys useless for the intended purpose. That is, Boys actually teaches away from the use of a battery, as recited in the claimed invention. Thus, it is respectfully submitted that neither Lebens et al nor Weindorf can be combined with Boys to teach the missing element of a battery since there is no motivation to add a battery in Boys as required by **MPEP 2143.01**. In addition, there is no reasonable expectation of success as required for showing a *prima facie* case of obviousness by combining the references according to **MPEP 2143.02**. Thus, for all of the reasons discussed above, neither Weindorf nor Lebens et al. can overcome all of the deficiencies of Boys and there is no motivation to combine the references. Therefore, it is respectfully submitted that none of Boys, Lebens et al. nor Weindorf, whether taken alone or in combination, discloses, suggests or makes obvious the claimed invention, and that independent claim 1 and claims dependent thereon (e.g., 7), patentably distinguish thereover.

New Claims

Applicant has added new claims 9 and 10 to further define the invention. These claims are based on claims 1 and 8, respectively with the addition of the limitation (verbatim for claim 9 and *mutatis mutandis* for claim 10):

wherein said device is adapted to regulate the current over the light emitting diode by pre-defining the timing of the pulse signal that determines the charge on the inductive device; wherein the maximum on-time keeps the current of the inductive device not higher than the maximum

current allowed through the light emitting diode, and the off time is chosen so that the current on the inductive device will decrease to zero".

Support for this limitation is taught in the specification for example based on paragraphs **[0010]** and paragraphs **[0020]** to **[0024].**

In addition, in Boys the current over the light emitting diode is provided from an external source, which is independent of the timing in the circuit. The power provided by the external source is affected by the location of the circuit relative to the external source and the housing of the circuit. Thus, Boys does not and cannot suggest regulating the current by using a pre-defined timed pulse signal that meets the above limitations. Instead in Boys additional circuit elements are provided to limit the current over the LEDs based on the provided current (*see* col. 6 lines 32-36 and col. 6, line 61 – col. 7, line 9).

Conclusion

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our

Deposit Account No. 22-0185, under Order No. 27592-00021-US3 from which the undersigned is authorized to draw.

Dated: July 11, 2008

Respectfully submitted,

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